

WIRELESS RF MODULE FOR AN MR IMAGING SYSTEM

Abstract of Disclosure

The present invention provides a system and method wirelessly transmitting MR signals from receive coils of an RF coil assembly to a remotely located receiver system. By utilizing wireless telemetry, ghosting, SNR problems, and standing waves on shields typically associated with cabled receive coils are avoided. Furthermore, by incorporating a rechargeable battery in place of DC cables, the coaxial cable conducting large currents can be eliminated. The present invention incorporates a transmitter that transmits a modulated MR signal to a receiver at the end of the bore of the magnet of the MRI system. Modulating the MR signals with a carrier frequency enables wireless transmission of the modulated signal to the remote receiver. Preferably, the modulated signal is transmitted using a 900 MHz carrier frequency. The receiver then demodulates the received signal and transmits the resulting signal to a system control for subsequent processing and image reconstruction.